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THE UNIVERSITY OF ALBERTA

AN ANALYSIS OF THE EFFECTS OF COUNSELLING AND GROUP GUIDANCE ON CHOICES OF EDUCATIONAL AND VOCATIONAL TOPICS AT THE GRADE NINE LEVEL

A DISSERTATION
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

DIVISION OF EDUCATIONAL PSYCHOLOGY

BY

WILLIAM REGINALD MORRIS
EDMONTON, ALBERTA
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SYNOPSIS

AN APPRAISAL OF THE EFFECTS OF COUNSELLING AND GROUP GUIDANCE ON REALISM OF EDUCATIONAL AND VOCATIONAL GOALS AT THE GRADE NINE LEVEL

This study sought to explore the influence of counselling and group guidance procedures alone and in sequence, on the realism of grade nine students' educational and vocational choices. The [illegible] students from [illegible] Junior High school were divided at random into three groups and subjected to a different sequence of group guidance and counselling procedures. Criteria of stability, compatibility and [illegible] were used to establish realism of choice. The findings of this study would suggest the superiority of both group guidance and counselling over either one of these two procedures alone. Further the evidence would suggest that in guiding students, the sequencing of group guidance first and then counselling has advantages over the opposite sequencing or the combination together of these two procedures. It is noted that the evidence presented is not clearly definitive in this regard (although in the other patterns of sequencing [illegible] considerable gains in establishing educational and vocational realism. [illegible] in grade nine and [illegible] upon the students' [illegible]. The study concluded by indicating the need for more definitive and [illegible] studies in this field before more specific conclusions can be reached.

CHAPTER I

AN ANALYSIS OF THE PROGRAM OF [illegible]

NEED, PURPOSES AND SCOPE OF INVESTIGATION

Counseling and vocational group guidance are comparatively recent additions to junior high schools in Florida.[1] Although [illegible] junior high schools, specific [illegible] to various types of guidance [illegible] pupils and to provide them with [illegible] guidance service.

Until the introduction of specialized guidance, counselling of graduating students on course and vocational choices was largely an incidental service provided by teachers and principals. However, the ever increasing complexity of the occupational scene with a corresponding increase in complexity of junior high school curricula, made it essential that [illegible] counseling, placement and vocational guidance be provided with specialized and [illegible] personnel.

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[1] Counselling, as a specialized service, was introduced into junior high schools of Florida in [illegible].

In order that such services may provide the maximum benefit to students, it is necessary to know the extent to which guidance affects students' course and vocational choices. Thus modifications in techniques and types of service may be developed, based on clearly defined goals and supported by the knowledge that student needs are being met by the guidance processes. The purpose of this study, then, is to explore the influence of counselling and group guidance procedures alone and in sequence on the realism of grade nine students' educational and vocational choices.

There is an increasing stress on the importance of sound quantitative counselling in junior high schools based on relevant information. For example, students in grade nine, should be aware of the relationships that exist between the marks made in grade nine and the course choices that are possible in grade ten.

Careful analysis of junior high school performance is necessary in helping students to make wise and realistic choices in grade ten.[2] For example, students with lower than "B" gradings are particularly in need of guidance sufficiently early in the grade nine year to enable them to improve gradings if possible to the level that serious restrictions will not be placed on grade ten choices and to assist them to choose courses in line with their abilities. Students with "B", "A" or "H" standings in all grade nine subjects may require help to select courses that are compatible with occupational preferences and in line with their abilities.

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[2] Province of Alberta, Senior High School Handbook, (Department of Education 1959).

Furthermore, the increasing complexity of today's society has intensified the need for specialized educational and vocational guidance. The range of choice both of educational and vocational opportunity is bewildering to students, especially those of grade nine who are faced with the crucial choices required at this level. It is necessary then for counsellors and group guidance instructors to be aware of the complexities of the educational and vocational scene and to provide the kind of counselling and group guidance that will help to clarify the situation in order that grade nine students may choose their courses and careers realistically.

To provide increasingly sound and realistic counselling and group guidance, it is necessary that guidance workers evaluate existing services to determine their effectiveness. Major studies, which have been made in this field, have not seemed fully applicable to the educational course and vocational counselling of junior high school students in Alberta schools. The present study, then, aims to fill a definite need for local research into the effectiveness of counselling and group guidance in an Alberta junior high school situation.

THE HYPOTHESIS

The main problem of this study may be stated as follows: What are the effects of different phasing of group guidance and individual counselling on realism of students' educational and vocational choices at the grade nine level?

The hypotheses of this study are:

(1) that as a result of a combined group guidance - counselling guidance program, more realistic educational and vocational choices will result than by either group guidance or counselling procedures alone;

(2) that the sequence of a group guidance - counselling program is such that greater realism of educational and vocational choice will be achieved by placing group guidance procedures before counselling in preference to the opposite sequence or to the simultaneous conduct of the two procedures;

(3) that realism of vocational and educational choices of grade nine students will continue into the high school program.

CRITERIA

Three criteria of realism will be used in this study namely: permanence of choice, stability of choice, and compatibility of educational course and vocational choice.

Permanence of choice refers to the degree to which vocational and educational course choices remain unchanged throughout group guidance and individual counselling processes. Stability refers to the consistency of choice between those made at counselling interviews and choices made at these points. Compatibility of choice is the consistency of the educational program choice with the stated vocational choice: for example, a student, who wishes to become an engineer, chooses the matriculation course. This is an example of compatibility. The student who wishes to become a nurse chooses commercial subjects. This indicates incompatibility.

LIMITATIONS OF THE STUDY

The design of the study was constructed to measure realism of choice during a certain specific period of time, namely between a twelve week period in the second term of the grade nine school year, and then a year later in April of the following school year.

Despite the fact that twelve weeks is a comparatively short period in the students' lives, it is a very vital period since it is at this time that students must make choices concerning high school courses. It is at this point that they make crucial decisions relative to their future educational and vocational plans. For example, if an university career is considered for a specified vocational choice, then, appropriate preparatory high school courses must be chosen. If not, then other non-university preparatory courses may be followed. Thus the limitation of the shortness of the experimental period is, to some extent, negated by the crucial decisions of this period.

A second limitation may be due to the somewhat localized origin of the experimental group which was drawn from only one fairly large Alberta junior high school. However, it may be assumed that many important similarities exist in counselling and group guidance between the experimental school and the other thirty-six Alberta junior high schools listed as having one or more guidance counsellors on staff.[3]

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[3] Guidance Counsellors in Alberta High Schools. Mimeographed list prepared by: Department of Guidance, Alberta Department of Education, Government of Alberta, 1958.

Therefore, the conclusions made on the basis of the findings of this study might be applied to many, and probably to most of the junior high schools in Alberta with similar counselling services.

A third limitation relates to factors other than counselling, that might have contributed to changes in students' choices. The main variables, those relating to group guidance and counselling have been identified and controlled to a large extent. However, such factors as the influence of parents, siblings or friends and the influence of classroom instruction have not been isolated. Nevertheless, counsellors were, in many instances, aware of these influences as related to individual cases and took them into consideration when counselling students.

DEFINITION OF TERMS

1. Categories: Divisions by educational course and vocational areas, i.e., matriculation, commercial, technical, general course, no choice.

2. Choices made at counselling interviews: refers to educational courses and vocational choices made by students at individual counselling interviews. The choices made at counselling interviews may or may not be the same as choices made at other points.

3. Experimental Group: refers to the nine grade nine classes in the school concerned which were divided into three equal groups, each containing seventy-two students. These three groups were identified as Groups A., B., and C.

4. Group guidance refers to the teaching of Part I. (occupations) of the Health and Personal Development course. (Alternative terminology: vocational instruction, vocational guidance).

5. Focus Points: indicate the time at which group treatment was started or changed from a specific type of guidance treatment to another and different kind of treatment, for example, counselling being replaced by group guidance. These points are designated throughout the study numerically by letters as P_1, P_2, etc. Questionnaires regarding educational course and vocational choices are given at focus points.

ABBREVIATIONS

The abbreviations listed below are some of those which are commonly used in the tables of the present study.

C. - Educational course choice.

Comm. - Commercial course.

Gen. - General course.

Matric. - Matriculation course.

No Ch. - No educational course or vocational choice.

Q. - Evaluation questionnaire.

Tech. - Technical course.

V. - Vocational choice.

CHAPTER II

RELATED STUDIES

INTRODUCTION

A review of the literature concerned with evaluating guidance procedures reveals the fact that there are relatively few studies devoted specifically to the evaluation of the effects of counselling and group guidance on realism of educational and vocational choices. However, of those studies which are related to counselling and group guidance, five of them seemed particularly relevant to this study and are briefly reviewed below.

The study by Stone[4] although devoted to college students, is significant because its design is similar to that of the present study. His evaluation is based on four groups of students; 1. those who received instruction and individual counselling; 2. those who received individual counselling only; 3. those who received instruction only, and 4. those who did not receive either instruction or counselling. He concluded that there was a slight increase in the number of highly satisfactory occupational choices in both groups receiving counselling, and that those who received both counselling and instruction showed a greater gain in "wise" choices than those who received only counselling. A third finding which was of particular interest to the present study,

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[4] C. H. Stone, "Evaluation Program in Vocational Orientation," Studies in Higher Education: Biennial Report of the Committee on Educational Research, 1938-40. (Minneapolis, Minnesota, 1941, pp. 131-41).

ing the difference that the number of "wise" choices decreased in those groups which were not counselled whether or not they received instruction.

A second study concerned with the effects of counselling is reported by Toven[5] who used a matched groups technique. He reported marked differences in favor of the counselled group on the basis of academic achievement. For example, one hundred and one of the counselled group were graduated as opposed to sixty-eight in the non-counselled group in spite of the fact that the graduates of the counselled group had a lower mean score on an academic aptitude test than did the non-counselled group.

Cole[6], by comparing a group of one hundred boys' club members who did not take advantage of the counselling services offered, with a group of one hundred who did, concluded that the counselled group had made a significantly better educational and vocational adjustment than the group that was not counselled.

Hewer[7] reported on a study of group and individual vocational counselling made by Hoyt.[8] Hoyt's findings indicated no differences in effectiveness between group and individual methods of counselling.

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[5] J. R. Toven, "Appraising a College Program," *Occupations*, (May, 1945), pp. 459-66.

[6] L. C. Cole, "Evaluating a Boy's Club Guidance Program," *Occupations*, XVII May 1939, pp. 707-709.

[7] Vivian H. Hewer, "Group Counselling, Individual Counselling and a College Class in Vocations," *American Personnel and Guidance Journal*, (May 1959), pp. 660-665.

[8] D. P. Hoyt, "An Evaluation of Group and Individual Vocational Guidance," *Journal of Applied Psychology*, (1955), pp. 26-30.

Hoyt's criteria were: satisfaction with vocational choice, certainty of vocational choice, and realism of vocational choice. Realism of vocational choice was determined by expert opinion based on judgments of four counsellors. Changes occurring in the realism of the vocational choice of the students from the pre-course choice was compared with the post-course choice and used as an index of effectiveness. Hoyt found difficulty in determining the extent to which changes occur in realism of vocational choices during the period when counselling was conducted. Hoyt's conclusions are that in his experiment, because of lack of consistent interrater agreement, it could not be determined whether real changes occurred in realism of vocational choices during the period in which the class and counselling were conducted. Because of this, no definite conclusion was drawn concerning the effectiveness of either the group or individual counselling approach. He suggests that continued exploration is necessary to establish appropriate criteria and to devise more effective experimental design.

Stephenson[9] made a "common-sense" appraisal of the field of vocational choice. He stresses caution in "freezing" students' occupational choices too early in life. It may "preclude an appropriate occupational choice in terms of the individual's needs and the demands of society."[10] Stephenson suggests that a great deal more careful

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[9] Richard M. Stephenson, "Realism of Vocational Choice," The Personnel and Guidance Journal, (April 1957), pp. 482 - 88.

[10] Ibid., p. [illegible].

research is necessary to determine why many students do not implement vocational choices. He suggests, however, that prestige of occupations is one of the more powerful criteria of choice. Many choices are simply aspirations based upon a commonly held belief concerning the desirability and prestige of certain occupations. The question is whether the choice represents a plan based upon a relatively realistic evaluation of job opportunity or an aspiration determined by popular standards of desirability.

To test the above, Stephenson conducted an experiment by which he compared the group course choices and occupational plans of one thousand grade nine students in four medium-sized, semi-industrial communities in New Jersey. The occupational information obtained was grouped in accordance with the six principal categories of the Alba-Edwards socio-economic grouping of the labor force.[11] Then student choices were compared with national distribution of the labor force and their father's occupations.

Stephenson's conclusions seem relevant to this study. He was concerned that students, in making vocational choices, should be aware of the necessity of differentiating between vocational plans and vocational aspirations. Stephenson's data shows that the choices made by students who planned their careers more closely reflect the occupational structure than choices made without planning. A second

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[11] Alba M. Edwards, "A Social-Economic Grouping of the Nation's Labor Force." In *Sixteenth Census of the United States: 1940. Population, Comparative Occupation Statistics for the United States, 1870-1940.* Washington: Government Printing Office, 1943.

conclusion was that students tend to over-select professional courses, as related to national figures and to under-select in the unskilled group. However, college preparatory courses were selected by a majority of students choosing professional careers. Stephenson concludes that many Grade nine students approach occupational planning with more realism than is sometimes assumed.

Variations in the findings of the studies reviewed seems to indicate the necessity for evaluating counselling and group guidance under a wide variety of conditions. Although agreement exists in some areas there seems to be a lack of uniformity of conclusions in others. It is apparent, however, that one of the greatest difficulties in evaluating counselling, is the lack of acceptable and adequate criteria.

CHAPTER III

EXPERIMENTAL DESIGN

The design of this study was constructed to compare first, the effects of counselling, group guidance, and no counselling or group guidance on educational course and vocational choices using the four realism criteria over a short treatment period. Secondly, to compare the influence of different phasing of counselling and group guidance on realism of choice over a longer period.

The plan involved the use of three groups designated as Groups A, B, and C. The time span of the shorter study was divided into two periods, each of six weeks duration falling in the period between January and the Easter vacation. Evaluation of choices was made at the beginning of each treatment period and again at the end of the second treatment period. Finally, an evaluation was made in April of the following year when the students were in grade ten. Evaluation of educational course and vocational choices was also made at the conclusion of the individual counselling interviews for each group.

The design was such that during the first treatment period Group A received vocational information only; Group B received individual counselling; and Group C received no treatment. During the second period, Group A received individual counselling; Group B, group guidance; Group C received both group guidance and individual counselling. Upon entering senior high school the students received no specific type of counselling or group guidance treatment,

The design of the study is summarized in Table I.

SAMPLE

The experimental sample was drawn from the nine classes of grade nine students attending Alexandra Junior High School, Edmonton, during the 1957-58 school year. Students in this school were not grouped on any basis in any of the nine grade nine classes. These nine classes were assigned at random to the three experimental groups.

The three experimental groups were further limited by eliminating from this study all students who were not present to complete evaluation instruments or who, for some reason such as extended illness, missed the counselling interview. The groups were then made equal in number by retaining, by random selection, students with complete files from the larger groups until all groups were numerically equal, each containing seventy-two students per group.

COUNSELLING SERVICES

Each student received at least one thirty-five minute educational interview during the experimental period. The counsellors were fully aware of the study, and were directed to provide, as closely as possible, a similar type of counselling service to each student. There were three counsellors who possessed, at the minimum, a Junior Guidance Certificate[15] in addition to two or more years of counselling experience at the junior high school level.

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[15] University of Alberta, *Calendar*, (1957-58), p. [illegible].

TABLE I

EXPERIMENTAL DESIGN OF TREATMENTS AND TIMES OF TESTING PERIODS

GROUP	TIME	TERM	TREATMENT	CODE	SUMMARY
A	First 6 weeks	$P_1 - P_2$	Group guidance	GG	Group guidance only
	Second 6 weeks	$P_2 - P_3$	Counselling	CO	Counselling only
	One year	$P_3 - P_4$	No treatment	NT	No special treatment
B	First 6 weeks	$P_1 - P_2$	Counselling	CO	
	Second 6 weeks	$P_2 - P_3$	Group guidance	GG	
	One year	$P_3 - P_4$	No treatment	NT	
C	First 6 weeks	$P_1 - P_2$	No treatment	NT	No treatment
	Second 6 weeks	$P_2 - P_3$	Counselling and Group Guidance	CG	Counselling Group Guidance
	One year	$P_3 - P_4$	No treatment	NT	

Tabulations are made at the following five points:

(1) Before treatment of any kind was given (called P_1).

(2) At the end of the first treatment period (P_2).

(3) At the end of the second treatment period (P_3).

(4) In April of grade ten year (P_4).

(5) At the counselling interview: before (-) and vocational choice (v).

The data available to the counsellor, at the time of interview, were as follows:

1. Cumulative Record with the following data:
    (a) Otis Quick-Scoring Mental Ability - Grades VII and IX.
    (b) Nelson Silent Reading - Grades VIII and IX.
    (c) Dominion Fundamental Operations (Arith.) Grade VIII.
    (d) D.A.T. (i) Clerical Speed and Accuracy.
    (ii) Mechanical Aptitude.
    (e) Kuder Preference Record (Vocational). Form CH.
2. Student's Scholastic Achievement including teacher's ratings copied from report cards (up to latest report card period).
3. Other pertinent information including personality ratings, Elementary School Achievement and Standardized Test record.

During or immediately following counselling interview, specially prepared interview record forms were completed. The following data were noted: (see Appendix A, Figure 7).

1. Student's course choice with information relative to why the choice was made.
2. Vocational choice.
3. Outline of course chosen.
4. Reasons for change of choice (if changes were made).

VOCATIONAL INSTRUCTION

During the specified treatment period, Unit IX - Education and Work in Alberta[13] was taught to each of the experimental groups by the same instructor. This unit fitted well into the time sequence of the experimental design with a suggested time allotment of four to five hours.

Instruction in this Unit of Health and Personal Development is termed "group guidance", or vocational instruction.

Some pertinent facts, arranged in the form as laid down in the Junior High School Curriculum Guide for Health and Personal Development, are shown in Table II.[14] The material, thus presented, gives a clear indication of the emphases placed upon the various aspects of group vocational instruction in Unit IX of this course.

QUESTIONNAIRES

Information data as to individual vocational and educational progress choices were tabulated from three forms, two questionnaires and a recording form from the structured interview.

The two questionnaire forms developed for this study may be found in Appendix A.

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[13] Department of Education, Province of Alberta, Junior High School Curriculum Guide for Health and Personal Development (1955 Edition, Unit IX Grade IX). pp. 153-158.

[14] Ibid., pp. 153-158.

TABLE II

SUGGESTED CONTENT FOR UNIT IV
GRADE IX GUIDANCE AND PERSONAL DEVELOPMENT [illegible] GUIDE

CONTENT	TEACHING SUGGESTIONS
I. A. Work demands respect. Purposes of work.	1. No attempt to direct student toward specific careers. 2. Students should try to enlarge on their purposes of work and show how they relate to their school studies.
B. The Importance of and Necessity for the General Employment Areas in Alberta.	
1. Unskilled labor. 2. Semi-skilled labor. 3. Skilled labor. 4. Semi-professional. 5. Professional.	A useful activity might be to divide the class into groups with each responsible for gathering information and building a display about an unskilled job.
II. Employment Available in Alberta for Students with	Adults are sometimes heard to say "I only went to Grade (?) in school, and I have been quite successful." Such a statement should provide an interesting discussion.
A. Grade IX Education.	
1. Classes.	
2. Disadvantages of unskilled work.	
C. How can the Unskilled Worker Improve his Education and Widen his Opportunities.	Students should know that some clerical and technical training can be acquired as part of a high school program.
D. Opportunities in Alberta for Further Education.	The emphasis here should be on the importance of continuing their education.

TABLE II (continued)

CONTENT	TEACHING SUGGESTIONS
1. High school; the advantages.	Choice of high school courses depends on a number of factors;
2. Universities and colleges.	1. Students previous academic accomplishments, his interests and abilities.
3. Institute of Technology and Art.	2. Availability of courses.
4. Schools of Agriculture.	3. Vocational goals.
5. Business Colleges.	4. Information and suggestions given him by his parents, principals, teachers and counsellors.
6. Vocational Training Schools.	

The first questionnaire (Q.1), was administered to the Pupil-Health and Personal Development classes by the instructor and was completed during class period. The timing of the administration of questionnaire 1 has been noted earlier in Table I, i.e., at the beginning of the study, and at the end of the treatment period.

The second questionnaire (Q.2) was administered by the high school counsellors, to the students in the experimental group and each one in high school in the same city. This was administered to the students in April of the study year.

Questionnaire 2 was more extensive than Questionnaire 1 and was intended to provide data in excess of that needed for this study. Questionnaire 1 was constructed to provide the data necessary to this study, while questionnaire 2 was designed to assist the counsellors and other guidance instructors to be aware of the variables in the study, as well as to provide the necessary evaluative data.

It is recognized that the mere administering of questionnaire 2 would serve to arouse the interest of many of the students towards the consideration of their own educational and vocational plans. The significance of this consideration is noted in the findings of this study.

CONSTRUCTION OF TEST

The final form of Questionnaire 1 (Q.1), Appendix A, represents the result of repeated trial pretestings that involved the following procedures:

1. Data from questionnaires 1 and 2 were compiled according to educational program categories for each treatment period, namely matriculation, commercial, technical, general, no choice.

2. Records of course and vocational choices at counselling interviews were compiled from the structured interview record forms.

3. Course and vocational choice changes during phases of treatment were compiled by groups and categories. The raw data is shown in tabular form in Appendix F, Tables VII to X.

Variations are shown in separate columns for course and vocational changes. The tables provide a necessary check on compensatory changes that may occur between phase evaluation points.

4. The data were then rearranged and transferred to graphical representations.

5. Course and vocational choices made at counselling interviews were compiled, by experimental groups. The actual number of choices are indicated on the graphic representations referred to in (4) above.

CRITERIA

The establishment of reliable criteria for evaluating realism of choice is possibly the most difficult task which faces guidance workers in educational research. In assisting students to make one of the most crucial decisions of their lives, viz: that of choosing a career, the factors involved are many and varied. Any attempt to assist students to make [illegible] [illegible] course and vocational choices

will be considered in this light and interpreted as a guide, as a general pattern well defined limits to meet the requirements of a small complex and on-going program.

After making due allowance for the many variables, some hidden, some apparent, three criteria, as defined in Chapter I, were chosen as basis for measurement.

1. Permanence.

2. Stability.

3. Compatibility.

1. Permanence refers to a "between phase point" comparison, between course and vocational choices made at the beginning of a phase of treatment with the choices made at the end of the same phase of treatment. Permanence scores are compiled first as ratios (as shown in Table XIV of Appendix C), and second as percentage scores (as in Table III of Chapter IV). Permanence, therefore, indicates the percentage of educational course or vocational choices that were not changed during a specific period of treatment that extended from one phase point to the next phase point.

2. Stability refers to a comparison of course and vocational choices made at phase points with choices made at structured interviews. This comparison, as in the case of the first criterion of permanence, is expressed as a ratio. Stability is determined as a ratio of the choices at phase points as to the choices made at structured interviews. Ratios of stability are converted to percentage scores and are used in the analysis of the data of this study. They are shown in tabular form in Table IV.

3. Compatibility: As a criteria of realism of educational and vocational choice, compatibility refers to a consistency of relationship that exists between educational and vocational choices. Compatibility exists when educational choices are made with due regard to their relationship to career choices and conversely, when vocational choices are made with the knowledge that they are related to educational choices.

In this study variations in the relationship between educational and vocational choices or compatibility are expressed as ratios. Thus, since compatibility of educational and vocational choices exists only when each is mutually related to the other, ratios of compatibility in this study are always expressed as the smaller number of choices, regardless of whether they are educational or vocational choices, as to the greater number of choices. Therefore compatibility scores, expressed as percentages, may be readily compared, as all compatibility scores are within the range of zero to one hundred percent, with the latter score indicating perfect compatibility.

The percentage scores of compatability are presented in tabular form in Chapter IV, Table V.

RESULTS

Realism of educational and vocational choices, in this study, has been expressed in terms of the above mentioned criteria, namely permanence, stability and compatibility. In order to provide a basis of comparison, criteria are expressed in terms of ratios computed as percentage scores. In all cases one hundred percent indicates perfect realism. Variations of realism of choice may range from one hundred percent, or perfect realism, to zero percent or complete lack of realism.

CHAPTER IV

ANALYSIS OF DATA

The method of analysis is directed towards detecting differences in realism among three groups at different phases of treatment. The comparisons are done for each of the four educational choice categories: matriculation, commercial, technical, general and "no choice" categories.

The comparisons for each educational course pattern are made for each of the three criteria - permanence, stability and compatibility. These measures are reported both as ratios and as percentages.

MATRICULATION PROGRAM CHOICE

a. Permanence. Of those students choosing matriculation at the beginning of the study, thirty were from Group A, thirty-three from Group B and twenty-four from Group C. During the first treatment period Group A received group guidance, at the end of which twenty-four of the original thirty students still chose matriculation. Permanence in Group A during the first treatment period, then, was eighty percent. During the same period Group B students, after individual counselling, showed ninety-four percent permanence, with thirty-one of the original thirty-three choosing matriculation. Group C received neither group guidance nor counselling, however, of the original twenty-four, twenty-two or ninety-two percent chose matriculation at the end of the first treatment period.

During the first treatment period, the twenty-four students of

TABLE III

PERMANENCE OF COURSE AND VOCATIONAL CHOICES IN PERCENTAGE SCORES AT SELECTED POINTS DURING THE EXPERIMENTAL PERIOD

Treatment Period	Treatment	Experimental Group	Matric.		Comm.		Tech.		Gen.		No choice	
			C	V	C	V	C	V	C	V	C	V
First	GO	A	80	83	90	71	64	20	33	/	47	65
P_1 to P_2	CO	B	94	97	83	80	80	0	/	/	18	48
	XT	C	92	82	82	88	83	100	/	/	39	56
Second	CO	A	93	93	80	83	75	75	50	/	16	64
P_2 to P_3	GO	B	94	85	60	43	57	100	0	/	0	35
	CG	C	94	86	54	67	44	43	0	/	20	69
Third	XT	A	86	77	50	73	27	0	0	/	0	48
P_3 to P_4	XT	B	92	86	91	83	16	8	0	/	0	30
	XT	C	84	80	44	50	38	43	/	/	0	29

Group A, choosing matriculation, were increased to twenty-nine as one technical student and four "no choice" students chose matriculation in this period. Under the impetus of individual counselling, twenty-seven of the twenty-nine students of Group A still chose matriculation at the end of the second treatment period giving a permanence index of ninety-three percent. At the beginning of the second period of treatment, Group B matriculation choices, under the individual counselling of the first period, had been increased by one commercial, one technical and fifteen "no choice" students. Of the forty-eight students of Group B choosing matriculation at the beginning of the second period, forty-five made the same choice at the end of the second treatment period, after receiving group guidance, indicating ninety-four percent permanence. Group C, which received both counselling and group guidance in the second period, showed a negligible increase in the number choosing matriculation, increase - from thirty-three to thirty-five. However, permanence during the second period was high, as thirty-three remained in matriculation at the end of the period indicating a permanence index of ninety-four percent.

During the third treatment period, permanence in Groups A, B, and C decreased - Group A to eighty-six percent, Group B to ninety-two percent, and Group C to eighty-four.

b. Stability. In terms of actual choices made at counselling interviews compared with choices made during treatment periods (Tables IV and XV), Group B, which received counselling in the first period,

showed an increase in both educational and vocational stability over choices made previously. Group B increased in educational stability by thirty percent, in vocational stability by five percent. Group A, which received group guidance in the first period increased in stability only three percent in vocational choices and decreased two percent in educational choices. Group C, with no treatment in the first period increased in educational stability by twenty-three percent from a low original fifty percent stability and increased nine percent in vocational stability.

During the second treatment period, Group A, under the influence of counselling, increased from seventy-one to ninety percent educational stability. In the same period Group B received group guidance and showed an educational stability decrease of two percent. Group C, with counselling and group guidance increased in educational and vocational stability from seventy-three to ninety-six and from eighty to ninety-eight percent stability. These were increases of twenty-three and eighteen percent respectively.

Entering high school the following fall seemed to have little effect on matriculation educational and vocational choices as stability remained constant within five percent in all groups.

This analysis is presented graphically in Figure [illegible] and by percentage scores in Table IV.

c. Compatibility. A percentage comparison of educational and vocational choices in the matriculation category, reveals a high degree of compatibility regardless of the treatment.

TABLE IV

STABILITY OF COURSE AND VOCATIONAL CHOICES IN [illegible] WITH CHOICES MADE AT COUNSELLING INTERVIEW
(Percentage Scores)

Treatment Period	Treatment	Group	Matric		Com		Tech		Gen		No Choice	
			C*	V*	C	V	C	V	C	V	C	V
At P_1	XT	A	73	88	49	50	57	0	0	/	7	62
	XT	B	68	85	66	83	83	100	/	/	0	55
	XT	C	50	81	79	82	66	33	/	/	3	29
Phase 1 P_1 to P_2	GO	A	71	91	80	86	66	100	0	/	7	64
	CO	B	98	90	88	83	50	100	0	/	100	79
	XT	C	73	90	79	91	100	77	/	/	6	31
Phase 2 P_2 to P_3	CO	A	90	93	95	93	62	75	0	/	33	81
	GO	B	96	95	77	100	100	0	0	/	40	72
	CG	C	96	98	64	91	88	77	/	/	20	36
Phase 3 P_3 to P_4	XT	A	95	91	63	93	88	100	0	/	0	100
	XT	B	98	95	77	50	66	0	/	/	0	64
	XT	C	93	95	57	72	66	55	/	/	0	53

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*C - course choice.
*V - vocational choice.

TABLE V

PERCENT COMPATIBILITY OF EDUCATIONAL AND VOCATIONAL CHOICES BY TREATMENT PERIODS

Period of Treatment	Treatment	Group	Matric	Comm.	Tech	No Choice
Before Treatment (At P_1)	XT	A	96	70	71	55
	XT	B	94	83	40	97
	XT	C	73	88	50	90
First Period (P_1 to P_2)	CO	A	96	80	33	56
	CO	B	96	70	29	29
	XT	C	95	92	77	94
Second Period (P_2 to P_3)	CO	A	95	75	27	16
	CO	B	84	55	50	20
	CO	C	80	90	87	35
Third Period (P_3 to P_4)	XT	A	77	92	57	0
	XT	B	89	82	80	0
	XT	C	98	100	83	0

TABLE VI

NUMBERS OF COURSE AND VOCATIONAL CHOICES MADE AT COUNSELLING INTERVIEWS

Group	Course Choices					Vocational Choices				
	Matric	Comm	Tech	Gen	No. Ch.	Matric	Comm	Tech	Gen	No Ch.
A	41	19	8	0	0	33	14	4	0	16
B	40	9	6	0	5	41	6	2	0	16
C	48	14	7	0	1	41	11	9	0	5

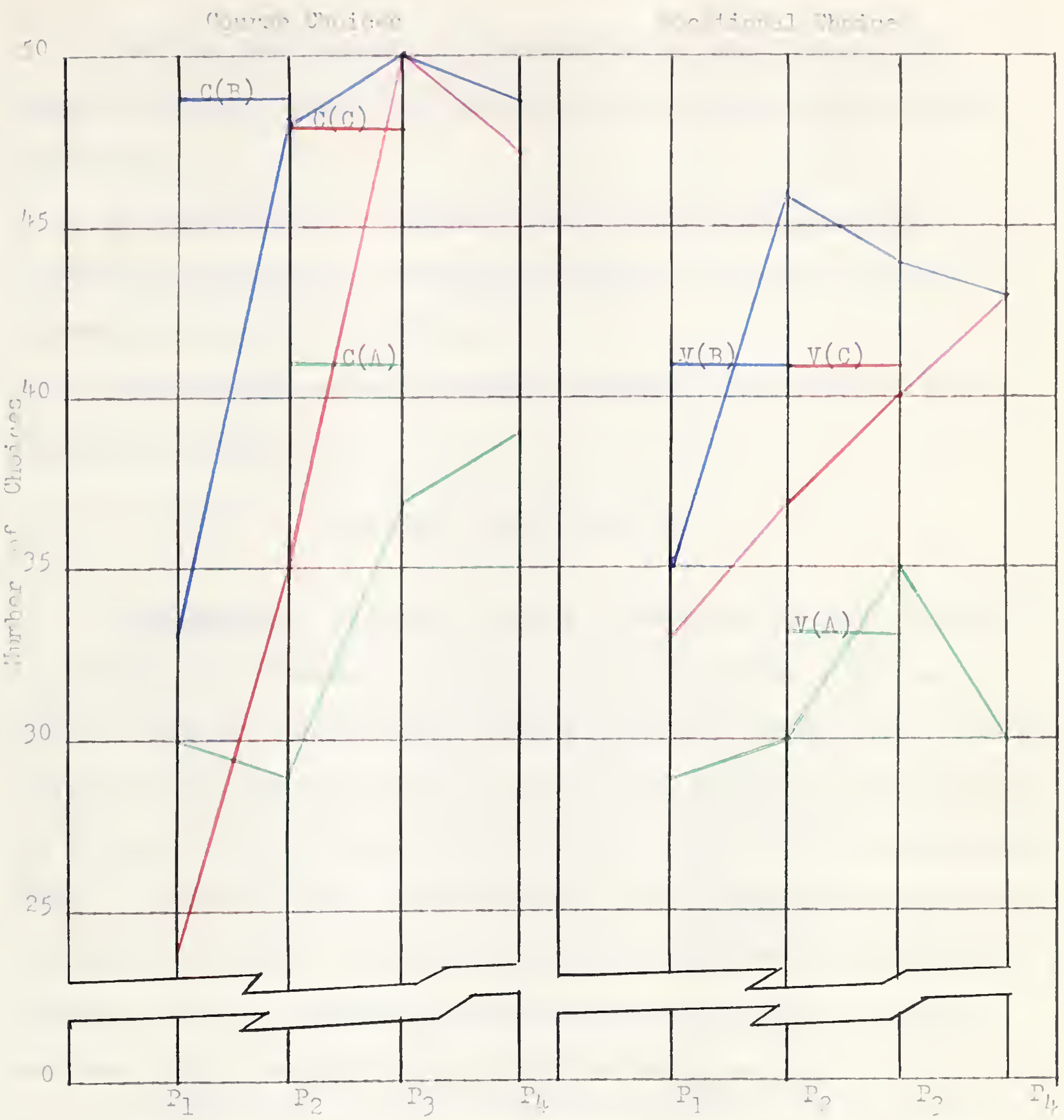

Figure 1. Totals of Educational Course and Vocational Choices in the Matriculation Category.

Legend: Choices:

Group A: —
Group B: —
Group C: —

No. Failed and / or Dropped out at Grade IX*
Group A: XA(V) ×
Group B: XB([illegible]) ×
Group C: XC([illegible]) ×

Number of Choices at Interview
Course
Group A: A(C) —
Group B: B(C) —
Group C: C(C) —

Vocational
A: A(V) —
B: B(V) —
C: C(V) —

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*Position of trend line at P_4 indicated by an X when students so designated at asterisk, are included in category.

However, the decrease of compatibility by twelve percent of Group B, while receiving group guidance in the second period may have significance.

It may also be of significance that Group A shows a sharp decrease in compatibility of eighteen percent in the period when the students enter senior high school.

Compatibility scores are shown in tabular form in Table V and graphically in Figure I.

COMMERCIAL PROGRAM CHOICE

a. Permanence. Students electing a commercial pattern indicate, in general, less permanence of choice than matriculation students. Group A, although showing ninety percent permanence in the first period, decreased in permanence of choice in the second period to eighty percent. For Groups A and C the trend of decrease is continued upon entering high school. During the third period however, Group B increased in permanence to ninety-one percent. The least permanence during the first and second treatment periods is shown by Group B while receiving group guidance, and Group C while receiving counselling and group guidance.

b. Stability. During the first treatment period, Group A, which received group guidance, increased in stability in both educational and vocational choices. Group B, under counselling, increased twenty-two percent in educational choices and maintained eighty-three percent in vocational choices. Group C, with no treatment, remained substantially at the same degree of educational stability.

In the second phase of treatment, Group A, with counselling, increased in stability in both areas of choice by fifteen and seven percent, respectively. Group C, with counselling and guidance, decreased fifteen percent in course stability. Vocational choices in Group C remained constant at ninety-one percent.

Upon entering senior high school all groups showed a decrease in stability. Group A decreased thirty-two percent in course stability and Group B decreased fifty-percent in vocational stability. Group C showed a substantial decrease in both educational and vocational stability.

c. Compatibility. The changes by phases of treatment in compatibility seem to be irregular. Group B had a low compatibility ratio of fifty-five percent under group guidance. However, Group A decreased slightly under counselling to seventy-five percent after showing eighty percent with group guidance treatment.

The above comparisons are graphically represented in Figure 2.

TECHNICAL PROGRAM CHOICE

a. Permanence. Technical students show a marked lack of permanence in educational choices. Group A, with group guidance, indicated sixty-four percent which was increased to seventy-five percent with counselling. However, Group A permanence of choice decreased forty-eight percent upon entering high school.

Group B in the first treatment period, with counselling, had a high degree of course permanence, which under group guidance, in the

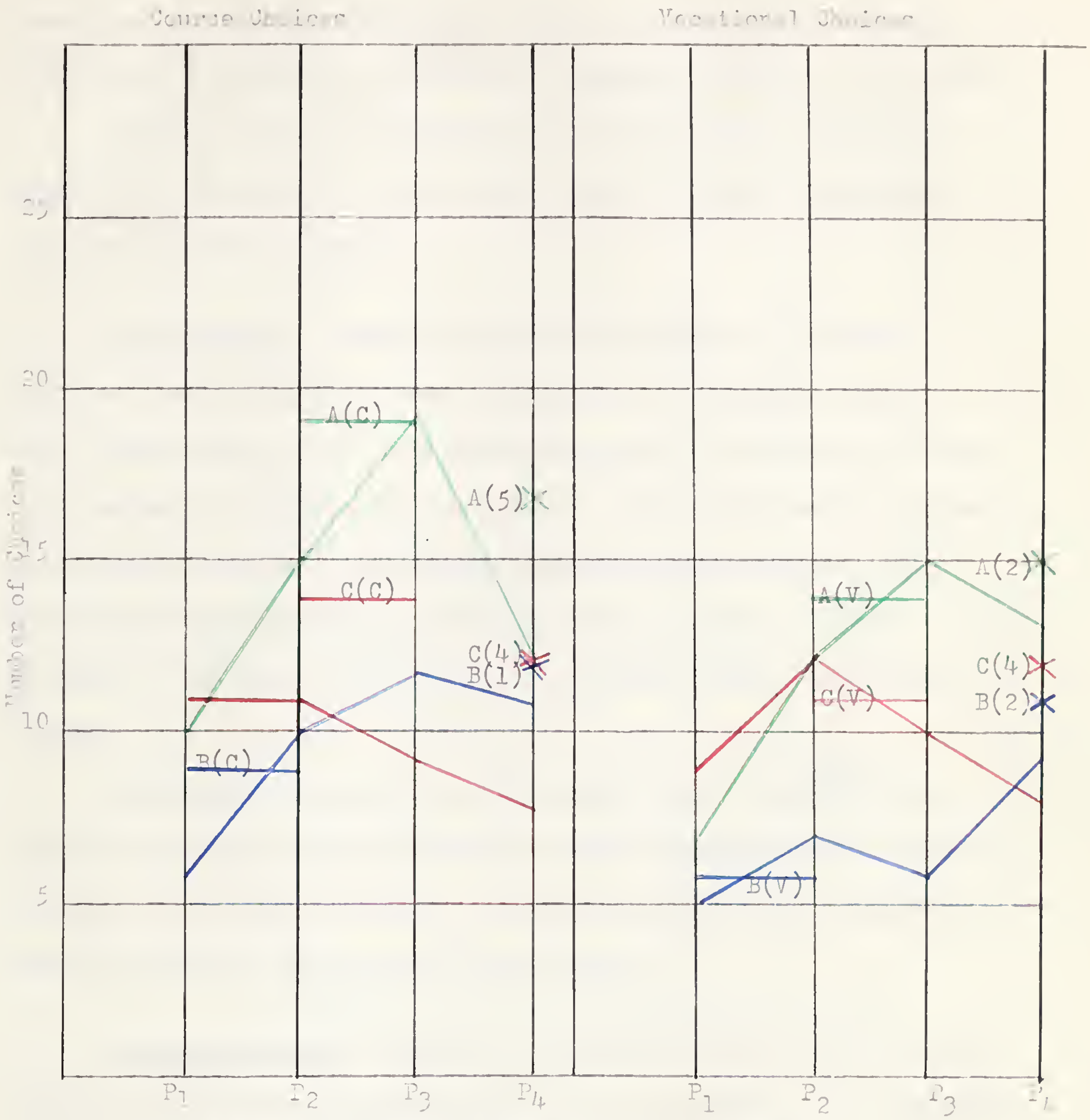

Figure 2. Totals of Educational Course and Vocational Choices in the Commercial Category.

Legend: Choices: No. Failed at Grade IX* Number of Choices at Interview.

Choices:		No. Failed at Grade IX*		Course		Vocational	
Group A:	—	Group A:XA(V)	×	Group A:A(C)	—	A:(V)	—
Group B:	—	Group B:XB(V)	×	Group B:B(C)	—	B:(V)	—
Group C:	—	Group C:XC(V)	×	Group C:C(C)	—	C:(V)	—

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*Position of trend line at P_4 indicated by an X when students so designated at asterisk, are included in category.

second period, decreased by twenty-three percent and upon entering high school this group's percentage of permanence dropped to sixteen.

Group C, with no treatment in the first period, followed by counselling and guidance in the second period dropped from eighty-three to forty-four percent.

b. Stability. Generally counselling seemed to influence technical course choices toward instability, for example, Group B, under counselling in the first phase decreased in stability by thirty-three percent; Group A, with counselling in the second phase decreased four percent. Group C with counselling and group guidance in the second phase decreased in stability by twelve percent. Group guidance on the other hand, seemed to increase stability of course choices.

Technical-vocational stability showed a wide variation which seemed to follow no consistent pattern except that generally, technical choices, in the case of Groups B and C, showed increased instability when the students entered senior high school.

c. Compatibility. Technical choices in Groups A and B show a low ratio of compatibility during the first two phases of the treatment period. Group C increased under counselling and guidance to a high compatibility score of eighty-seven percent. Upon entering high school, Groups A and B increased in compatibility by thirty percent in each case.

Compatibility in the technical category is graphically represented in comparative trend lines in Figure 3 and in percentage scores in Table V.

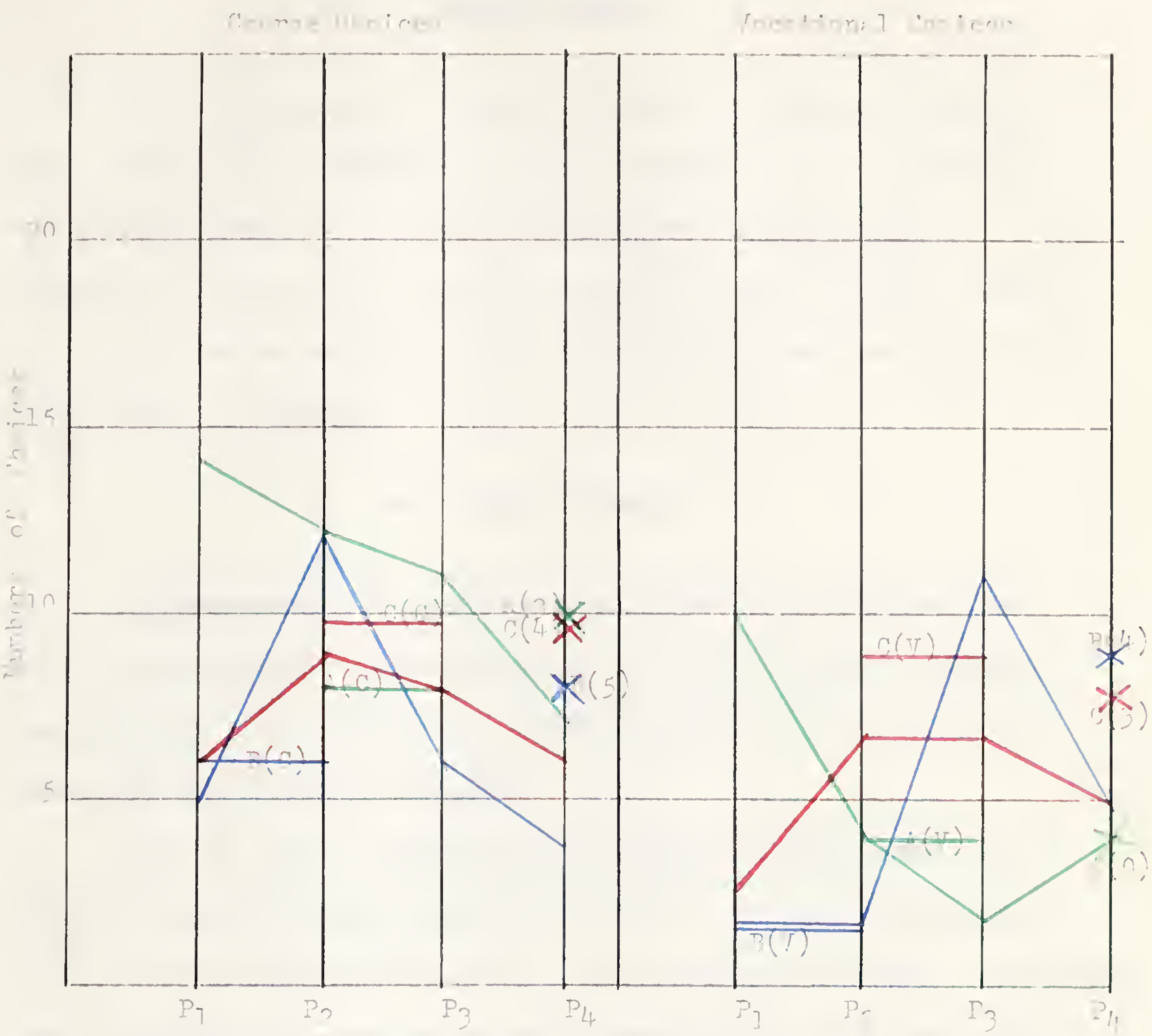

Figure 3. Totals of Educational Course and Vocational Choices in the Technical Category.

Legend: Choices:		No. Failed at Grade IX*		Number of Choices at Interview			
				Course		Vocational	
Group A:	🟩	Group A:XA(N)	✕	Group A:A(C)	🟩	A:(V)	🟩
Group B:	🟦	Group B:XB(N)	✕	Group B:B(C)	🟦	B:(V)	🟦
Group C:	🟥	Group C:XC(N)	✕	Group C:C(C)	🟥	C:(V)	🟥

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*Position of trend line at P4 indicated by an X when students as designated at asterisk, are included in category.

GENERAL COURSE

The small number of students choosing the General Course in this study seems to indicate a lack of interest in this category. The greatest number of General Course choices at any period of treatment was three which occured in Group A during the first phase.

No detailed analysis of this category is given because of the small number of choices.

"NO CHOICE" CATEGORY

a. Permanence. It should be kept clearly in mind that the higher the percentage of permanence is in the "no choice" category, the lower are the percentage of positive choices of matriculation, commercial and technical programs.

Group A, while receiving only vocational instruction, in the first period, maintained twenty-nine percent more course permanence in "no choice" category than Group B who received individual counselling. Group C, during the same period, while receiving no treatment maintained twenty-one percent greater course permanence than Group B. For Group B the index of permanence was eighteen percent.

In the second period of treatment Group A with counselling, decreased "no choice" permanence by thirty-one percent. The remaining eighteen percent of Group B's "no choice" students left this category in the second phase under group guidance reducing permanence in this group to zero. Group C decreased from twelve to three "no choice" with

counselling and guidance but still maintained twenty percent course permanence.

The pattern of vocational choices in the "no choice" category generally in the first period, follows a similar pattern to educational course choices. Under counselling only in the first period, Group B permanence is decreased to forty-eight percent; Group A, with group guidance in the first period and Group C, with no treatment remain at sixty-five and fifty-six percent respectively.

However, in the second period the pattern of vocational choice was irregular. Group A, with counselling decreased by one percent only. Group B, however, with group guidance decreased in permanence by thirteen percent. Group C with guidance and counselling increased in vocational permanence by thirteen percent.

Upon entering high school, although all groups decreased in permanence, all groups still retained a substantial percentage of vocational "no choice" students.

b. Stability. The no choice category provides some definite evidence of the effect of counselling and group guidance on educational course and vocational choices. Before treatment all groups had comparatively low scores of stability ranging from Group B in educational choices of zero percent to Group A with sixty-two percent in vocational choices. Group A, while receiving group guidance, increased only from sixty-two to sixty-four percent in course stability. However, under counselling Group A increased in course choices from zero to one hundred percent and in vocational choices from fifty-five to seventy-nine

percent. Group D with no treatment changed from three percent to six percent in course stability and from twenty-nine to thirty-one percent in vocational stability.

During the second phase of treatment, Group A, with counselling, increased from seven to thirty-three percent in course choices and in vocational choices from sixty-four to eighty-one percent in vocational stability. On the other hand, Group B, receiving group guidance, decreased in stability in course choices by sixty percent and in vocational choices by seven percent. Group C, under combined counselling and guidance, increased in course stability by fourteen percent and in vocational choices by five percent.

Upon entering senior high school in phase three of treatment, all students were forced by circumstances to make educational course choices, therefore the stability scores in this area seen to reflect these forced choices by a reduction to zero stability in all groups. However, the vocational stability gains which were made are generally maintained or increased, the greatest gains being shown by Group B which received counselling after receiving group guidance. The gain in this case was from thirty-six to eighty-three percent stability.

c. Compatibility. Compatibility in the "no choice" category varies widely from group to group. However, the trend seems clear. Figure IV shows the trend toward students making both educational and vocational choices, particularly after counselling. Group A, with counselling, decreased "no choice" category in educational courses from twenty-eight to five, while during the same period, the number of

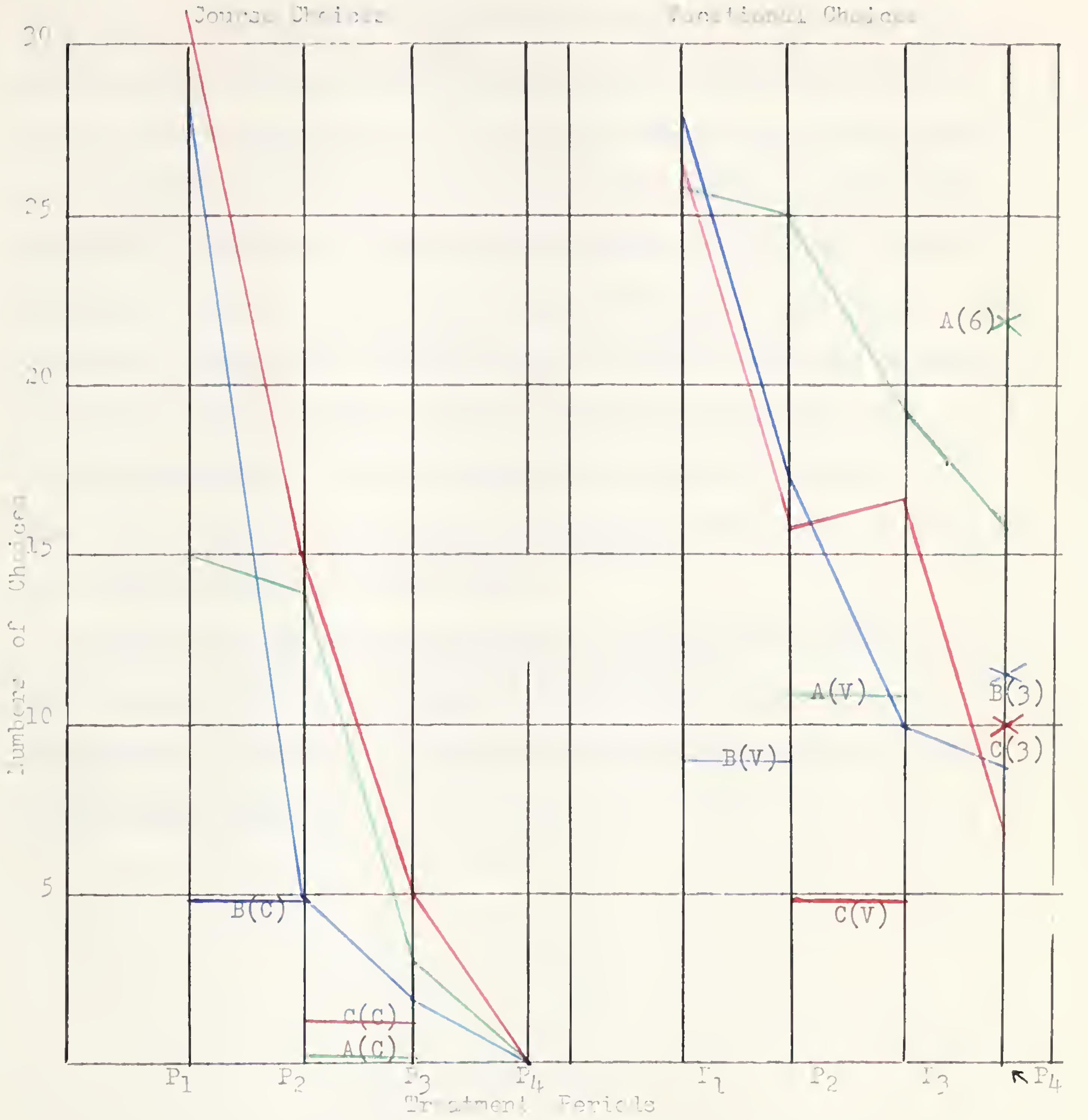

Figure 4. Totals of Educational Course and Vocational Choices in the No Choice Category.

Legend: Choices: No. Failed and / or Dropped out at Grade IX* Number of Choices at Interview
Course Vocational

Group A: —— Group A:A(6) ✕ Group A:A(C) —— A:A(V) ——
Group B: —— Group B:B(3) ✕ Group B:B(C) —— B:B(V) ——
Group C: —— Group C:XC(3) ✕ Group C:C(C) —— C:C(V) ——

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*Position of trend line at P_4 indicated by an X when students so designated at asterisk, are included in category.

vocational "no choice" dropped to zero, - and in conjunction with a corresponding increase in compatibility from the beginning to the end of the first treatment period from ninety-seven to ninety-nine percent. Group D, remaining group patterned in the first period, increased "no choice" in second term by one and made a similar decrease of one in vocational choices. Thus Group D's compatibility became remained practically unchanged. However, Groups A, B, and C retained sixteen, nine and six "no vocational choice" students, respectively, [illegible] retaining ratios high. Thus all groups had a "zero" compatibility in the third treatment period because of the elimination of vocational and avocational choices at this time.

Figure 4 is a graphic representation of compatibility trends in the "no choice" category. Appendix C, Table XII, shows the ratio of compatibility. Table 5, in Chapter IV, presents compatibility ratios by percentage scores.

CHAPTER V

SUMMARY OF FINDINGS

Following the method of analysis of data outlined in the last chapter, this chapter will be devoted to summary of findings. The data will be examined in four categories: matriculation, commercial, technical and "no choice", according to the three criteria of permanence, stability and compatibility in terms of the educational and vocational choices and under three types of treatment.

MATRICULATION CATEGORY

In the matriculation category groups showed a high degree of permanence of educational course choice. The least permanence was indicated by Group A in phase one with group guidance treatment. The greatest permanence was shown by Group B with counselling in the first phase and group guidance in the second period of treatment. Group C was practically as permanent in the first period with no treatment as in the second period with both counselling and group guidance.

All groups were slightly less permanent in educational course choice upon entrance to senior high school.

Vocational permanence in the matriculation group followed a similar pattern to that of educational choice. A considerable decrease of vocational permanence in Groups A and C occurred when the students entered senior high school.

The high compatibility scores of matriculation students might

indicate that, generally, students understood their matriculation needs and are choosing their life's work accordingly. The three periods of greatest uncertainty were: 1. Before any treatment, 2. Group I when receiving group guidance after counselling, 3. Group I upon entering senior high school.

1. It would seem logical that before counselling or group guidance grade nine students should be uncertain of their educational and vocational choices.

2. The decrease of compatibility during group guidance may be due to the general nature of vocational instruction received in grade nine.[15] Therefore, the specific requirements and educational background information necessary for entering a specific field of work may be lacking in the case of many students who have made incompatible choices. The difference between studying and planning for a career and simply having aspirations towards entering a career may not be made clear to such students by group guidance instruction.

COMMERCIAL CATEGORY

The decrease in permanence of educational choices and vocational choices in this category seems to be explained by an increase in stability and compatibility during corresponding periods of treatment,

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[15] Department of Education, Province of Alberta, Junior High School Curriculum Guide For Health and Personal Development (195[illegible] Edition Unit II) p. 15[illegible] - 15[illegible].

that is, the counselling changed their choices first, by bringing them into line with choices made at counselling interviews, and secondly, to make their educational and vocational choices more compatible. This trend continued into senior high, at which time the effects of the grade nine Departmental Examinations, in failures and dropouts, tended to increase instability. However, those students who passed the Departmental Examinations showed a high degree of compatibility of educational course and vocational choices.

Again, as in the case of the matriculation category, higher stability scores were shown by Groups I and II during counselling treatment than during group guidance periods.

TECHNICAL CATEGORY

For technical course choices, generally, the stability of course choices is increased as the experience increases. The combined treatment, regardless of sequence, seems to reduce the variation between the students' choices as indicated on the questionnaires with those made at counselling interviews. Various phases of treatment, taken separately seem to have had little specific effect on this general tendency toward increasing stability. When Groups I and II entered senior high school, their stability decreased, probably because of the failures and dropouts in this category. The influence of failures and dropouts is also reflected in the sharp decrease of educational course and vocational compatibility in Groups I and II during the third treatment period.

NO CHOICE CATEGORY

In this category of indicated educational program choice, the generally the tendency of decreasing stability is evidence of a rapid change in this category as students made educational course or vocational choices in the matriculation, commercial or technical categories.

A comparison showed the rapid change of educational choice preference in Group A after counselling in the first treatment period. Group B, with initial group guidance treatment, and Group C, with no treatment, were considerably slower to change from the "no choice" category. However, all groups had reduced educational course choices in this category to zero regardless of the treatment as the students prepared to enter senior high school at the end of the second phase of treatment. This is probably explained in two ways: First the effect of counselling and group guidance programs in preparing the students to make educational choices. Secondly, the realities of the situation compelled students to make course choices in order to adjust their educational program to the requirements of the senior high school curriculum. For vocational choices, however, the situation was somewhat different. The increased stability of vocational choices in the "no choice" category throughout all periods of treatment shown in Table [illegible] that the decision of a career is a more difficult undertaking than that of making [illegible] educational choices, and that the necessity of making a vocational choice is not as immediate as that of making an educational commitment,

[illegible]

A. The analysis of the data of this study has indicated the following findings:

1. Regardless of treatment during the experimental period all students at the end of the treatment period were (approximately) at the same level in their educational choices - all students having made an educational course choice.

2. Although some students had not made vocational choices at the end of treatment, those vocational choices which had been made, were generally compatible with educational choices.

However, to achieve this degree of realism, evidence in the study suggests the following:

(a) If vocational guidance instruction is given before counselling, there is evidence of considerable change toward realism of choice. This is shown in Table III, Page 87. The changes range from ninety percent in commercial course choices to twenty percent in technical vocational choices in percentages of choice in Group A. Percentage increases of stability brought in Group B from these percentages points to [illegible] points [illegible]. These changes are shown in Table IV, Page 90. However, when counselling is given, following group vocational instruction, it generally results in a further strengthening of realism of choice. In Group [illegible], the range of increase is from [illegible] to fifty-five percent and in Group [illegible] the range is from [illegible] to [illegible] percent.

(b) When counselling preceded group guidance, there is slight evidence of changing choices toward greater realism during group guidance. In fact there is evidence of increase of realism in percentage and some evidence of increasing realism or stability of choice while receiving group vocational guidance.

(c) During the experimental period the group receiving no treatment in the first phase showed considerable evidence of moving toward realism of choice. This phenomenon might be explained on the basis that most students are acutely aware of the fact that their school mates are receiving certain kinds of treatment and they are influenced by this condition. In the case of this thesis, the choices made during "no treatment" phases may also have been influenced by information regarding the counselling interviews and group guidance some of which undoubtedly may have been passed among the grade nine students involved in the experiment. However, there seems to be evidence in the experiment that the movement toward taking educational routes and vocational outlets was considerably accelerated when counselling was received following a "no treatment" period. This is clearly exemplified by the stability of choice of Group I during the first phase of treatment and to a lesser extent by Group 2, in the second phase of treatment.

Further study of the data seems to justify the following conclusions:

1. Evidence in this study seems to indicate that counselling exerts a stronger influence on grade nine students toward stability of matriculation choices than does group guidance.

4. Upon entrance into senior high school, all groups made gains in vocational permanence, stability, and compatibility. It seems likely that the impact of occupational environment may have helped to create this situation. A recent study dealing with permanence of preference and stability of high school interest results from [illegible] and [illegible] in this line.

5. The fact that a fairly large percentage of students' vocational choices fell in the "no choice" category, even into senior high school, is of significance. The uncertainty that some students in all groups seem to show in regard to making vocational choices may be indicative of lack of emphasis on vocational instruction by counselors, teachers, and administrators.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

This study sought to compare the influence of group guidance and counselling procedures, alone and in sequence, on the realism of grade nine students' educational and vocational choices. To this end the following hypotheses were examined:

(1) that as a result of a combined group guidance - counselling guidance program, more realistic educational and vocational choices will result than by either group guidance or counselling procedures alone;

(2) that the sequence of a group guidance - counselling procedure is such that greater realism of educational and vocational choice will be achieved by placing group guidance procedures before counselling in preference to the opposite sequence or to the simultaneous conduct of the two procedures;

(3) that realism of vocational and educational choices of grade nine students will continue into the high school program.

The data would suggest first, that both counselling and group guidance procedures are better than either procedure alone, in affecting student realism of vocational and educational choice. Further, while all groups at the end of the experimental guidance period of the study, showed significant realism and increases on testing but both group guidance and counselling, the data seemed to suggest that the sequence: group guidance and then counselling, had advantages over the reverse sequence and also that the former sequence had advantages over [illegible]

guidance and counselling given simultaneously. Further, the data seemed to suggest that group guidance procedures tended to produce a lack of stability of choice which could lead to rectification by counselling.

The third hypothesis, that of continued realism into grade ten remained open to question. It was found that in many instances such realism was maintained. However the nature of the high school program, also the cultural prestige of the matriculation program together with the effect of the failures and dropouts at grade nine, seemed to undo some of the realism achieved at the grade nine level.

The implications of the findings of the study, which are at best suggestive only of trends, would seem to be as follows:

1. The group guidance program should precede counselling. This could be established on a period basis in that the group guidance program itself introduces the student to wide spheres of opportunities available to him. This, by its very nature, would cause instability or lack of permanence of choice. Subsequently, in the counselling situation, the student with the counsellors, could deal with greater stability among the opportunities available. On the other hand, the evidence of this study is not sufficiently conclusive to establish the unequivocal superiority of the above sequence inasmuch as major gains were made by alternate sequencing.

2. This study has never been viewed as being other than exploratory in nature and has sought only to suggest critical areas in the field of guidance. It, therefore, is apparent that there is an urgent need for more experimental research (statistical validation) in this area.

than were used in this study. Certainly, more rigid control of the experimental variables [illegible] a larger and more diverse sampling in a wider variety of schools, is a logical next step. The findings of this study in regard to the guidance possibilities in senior high school, particularly in relation with its [illegible] high school programs, [illegible] should not be separated from any investigations conducted at the junior high school level. Conversely, studies conducted specifically at the senior high school level, should be extended downward into the junior high school.

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APPENDIX A

VALIDATION FORM

QUESTIONNAIRE (No. 1)

This questionnaire has been prepared to help your counsellor in assisting you to better choose your Senior High School courses. This in turn will assist you to choose your life's work more wisely.

Be sure to answer the questions honestly and carefully. If you are not sure, either leave the answer blank or answer "not sure."

Sign your name to the questionnaire and return it to your homeroom teacher.

(Homeroom teachers please return questionnaires to Mr. Morris)

1. Give the meaning of the following words as they apply to Senior High School.

   a. Matriculation ______________________________
   b. Commercial Course ______________________________
   c. Technical Course ______________________________
   d. Vocational Objective ______________________________

2. During my Senior High career I plan to take the following course: (Matriculation, General Course, Commercial, Technical)
   Answer ______________

3. I have not yet chosen my Senior High School Course:
   Answer ______________

4. The reason I chose this course was: (To be answered only if you have decided on your Senior High School Course)
   ____
   ____
   ____
   ____

5. My vocational objectives are as follows:
   1. ______________ 2. ______________ 3. ______________

6. If you have decided upon a vocational objective, how long have you had this vocational objective?
   Answer ________ years.

7. If you have chosen your Senior High School Course, where did you receive the information necessary to make your choice?
   Answer ______________________________

QUESTIONNAIRE (No. 4) continued.

8. If you have chosen your course as suggested above, in what way is it related to your life's work?
(Vocational choice: see question 4)

Figure 5. Evaluation questionnaire administered at phase points 1, 2 and 3.

Name ______________________________

TO STUDENTS OF GRADE X

QUESTIONNAIRE (No. 5)

1. My Grade X course choice is ....(Matriculation)
(Commercial)
(Technical)
(General)

2. My vocational objective is ....

3. In Grade IX my vocational objective was ....

4. I graduated from Grade IX with a .... grading.
(Pass or Honors)

Figure 6. Evaluation questionnaire administered at phase point 4.

JUNIOR HIGH SCHOOL

GUIDANCE DEPARTMENT

Interview Record

Student: Grade ....

Homeroom ....

Referred by:

Reason for Interview:

Counsellor's Suggestions:

....

Home Room Teacher Counsellor

(This form must be signed by the homeroom teacher before filing)

Figure 7. Evaluation record form completed by counsellor at structured counselling interview.

APPENDIX B

TABLES USED IN COMPILATION
OF CATEGORY TOTALS

Tables VII through X illustrate numbers of educational course and vocational changes by categories. Changes in choices are indicated in each of the treatment areas and from the end of the treatment period to April 1958. Each table illustrates changes from category, shown in table heading into other categories listed. The original number in subject shown in upper left box is given 1. for courses upper left chart marked "At P_1", 2. for vocational choices at upper right marked "At P_1".

Compilations were made from Tables VII through X for total choices shown graphically in Figures 1 - 4.

Tables XI through XIII show, by groups, course changes by periods of treatment. Compilations of data from these tables are shown by categories, in Appendix III in Tables VII through X.

TABLE VII

COMPARATIVE TOTALS OF PUPILS IN [illegible] IN MATRICULATION COURSE AND VOCATIONAL CHOICES

Matriculation			Course Changes				Vocational Changes			
At P_1				$P_1 - P_2$				$P_1 - P_2$		
A	B	C		A	B	C		A	B	C
31	33	34	Matric	24	21	22	Prof.	24	24	27
			Comm.	3	0	1	Comm.	2	0	2
			Tech.	1	1	0	Tech.	1	0	1
			General	0	2	0				
			No choice	2	0	1	No choice	1	1	2
				$P_2 - P_3$				$P_2 - P_3$		
				A	B	C		A	B	C
			Matric	27	45	33	Prof.	29	29	32
			Comm.	2	1	2	Comm.	0	0	1
			Tech.	0	1	0	Tech.	0	4	1
			General	0	1	0	No choice	1	3	3
			No choice	1	0	0				
				$P_3 - P_4$				$P_3 - P_4$		
				A	B	C		A	B	C
			Matric.	32	47	42	Prof.	27	37	32
			Comm.	2	1	4	Comm.	2	1	3
			Tech.	3	1	2	Tech.	0	1	0
			General	1	0	0				
			No choice	0	0	0	No choice	5	4	1

Course Choices Fail or Quit				Vocational Courses Fail or Quit		
A	B	C		A	B	C
1	1	3		1	2	1

TABLE VIII

COMPARATIVE TOTALS BY PHASES, IN CHANGES MADE IN COMMERCIAL COURSE AND VOCATIONAL CHOICES

Commercial			Course Changes							Vocational Changes			
At P_1				$P_1 - P_2$							$P_1 - P_2$		
A	B	C		A	B	C					A	B	C
10	6	11	Matric.	0	1	0				Prof.	1	1	1
			Comm.	9	5	9				Comm.	5	4	8
			Tech.	0	0	0				Tech.	0	0	0
			General	0	0	0							
			No Choice	1	0	2				No choice	1	0	0
				$P_2 - P_3$							$P_2 - P_3$		
				A	B	C					A	B	C
			Matric.	2	2	4				Prof.	2	0	2
			Comm.	12	6	6				Comm.	10	3	8
			Tech.	0	1	1				Tech.	0	2	1
			General	0	0	0							
			No choice	0	1	0				No choice	0	2	0
				$P_1 - P_3$							$P_1 - P_3$		
				A	B	C					A	B	C
			Matric.	1	1	5				Prof.	2	1	1
			Comm.	9	5	5				Comm.	4	3	8
			Tech.	0	0	0				Tech.	0	0	1
			General	0	0	0							
			No Choice	0	0	1				No choice	0	1	0
Course Choice				$P_3 - P_4$			Vocational Choice				$P_3 - P_4$		
Failed or Quit				A	B	C	Failed or Quit				A	B	C
			Matric.	2	0	1				Prof.	1	0	1
			Comm.	10	9	4				Comm.	11	5	5
A	B	C	Tech.	1	1	0	A	B	C	Tech.	1	0	0
			General	0	0	0							
6	2	0	No choice	0	0	0	2	2	4	No choice	1	0	0

TABLE IX

COMPARATIVE TOTALS BY CLASSES, IN CHANGES MADE IN TECHNICAL COURSE AND VOCATIONAL CHOICES

Technical			Course Changes								Vocational Changes			
At P_1				$P_1 - P_3$								$P_1 - P_2$		
A	B	C		A	B	C						A	B	C
14	5	6	Metric.	1	1	1					Prof.	2	1	0
			Comm.	0	0	0					Comm.	0	1	0
			Tech.	9	4	5					Tech.	2	0	3
			General	0	0	0								
			No choice	4	0	0					No choice	6	2	0
				$P_2 - P_3$								$P_2 - P_3$		
				A	B	C						A	B	C
			Metric.	3	1	4					Prof.	0	0	1
			Comm.	1	1	0					Comm.	0	0	0
			Tech.	9	4	4					Tech.	3	2	3
			General	0	0	0								
			No choice	0	1	2					No choice	2	2	3
				$P_1 - P_3$								$P_1 - P_3$		
				A	B	C						A	B	C
			Metric.	4	2	4					Prof.	3	1	1
			Comm.	1	1	0					Comm.	0	1	0
			Tech.	9	1	2					Tech.	2	1	1
			General	0	0	0								
			No choice	0	1	0					No choice	5	1	1
Failed or Quit at Grade IX				$P_3 - P_4$			Failed or Quit at Grade IX					$P_3 - P_4$		
A	B	C		A	B	C	A	B	C			A	B	C
			Metric.	2	0	0					Prof.	1	3	1
5	5	5	Comm.	0	0	0	1	4	3		Comm.	0	1	0
			Tech.	0	1	3					Tech.	0	1	3
			General	0	0	0								
			No choice	0	0	0					No choice	1	2	1

TABLE [illegible]

COMPARATIVE TOTALS BY GRADES, IN [illegible]
IN SCHOOL COURSE AND VOCATIONAL CHOICES

"No Choice"			Course Changes							Vocational Changes			
$A + P_1$				$P_1 - P_2$							$P_1 - P_2$		
A	B	C		A	B	C					A	B	C
14	27	21	Matric.	4	15	12				Prof.	3	10	9
			Comm.	2	5	1				Comm.	4	2	1
			Tech.	0	2	4				Tech.	2	2	3
			General	1	0	2							
			No choice	7	5	12				No choice	17	14	15
				$P_2 - P_3$							$P_2 - P_3$		
				A	B	C					A	B	C
			Matric.	5	1	8				Prof.	4	5	4
			Comm.	4	3	0				Comm.	5	3	1
			Tech.	2	0	3				Tech.	0	4	2
			General	0	1	0							
			No choice	2	0	3				No choice	16	6	11
				$P_1 - P_3$							$P_1 - P_3$		
				A	B	C					A	B	C
			Matric.	7	17	20				Prof.	5	13	12
			Comm.	6	5	2				Comm.	7	3	2
			Tech.	0	3	6				Tech.	1	5	4
			General	0	1	0							
			No choice	2	1	3				No choice	13	7	10
Failed or Quit				$P_3 - P_4$			Failed or Quit				$P_3 - P_4$		
A	B	C		A	B	C	A	B	C		A	B	C
0	1	1	Matric.	0	0	1	[illegible]	1	3	Prof.	0	1	5
			Comm.	0	[illegible]	0				Comm.	0	2	0
			Tech.	0	1	1				Tech.	0	0	[illegible]
			General	0	0	0							
			No choice	0	0	0				No choice	2	3	4

TABLE XI

EDUCATIONAL COURSE CHANGES IN GROUP A

	At P_1	Course Changes	P_1 - P_2	P_2 - P_3	P_1 - P_3	P_3 - P_4
1. Matriculation	30					
Matric		1-1	24	27	27	32(+1)*3
Comm		1-2	3	2	2	2
Tech		1-3	1	0	0	3
No choice		1-4	2	1	1	0
General		1-5	0	0	0	1
2. Commercial	10					
Matric		2-1	0	2	1	2
Comm		2-2	9	12	9	10(+6)*1
Tech		2-3	0	0	0	1
No choice		2-4	1	0	0	0
General		2-5	0	0	0	0
3. Technical	14					
Matric		3-1	1	3	4	2
Comm		3-2	0	1	1	0
Tech		3-3	5	9	9	3(+5)*2
No choice		3-4	4	0	0	0
General		3-5	0	0	0	0
4. No Choice	15					
Matric		4-1	4	5	7	2
Comm		4-2	3	4	6	0
Tech		4-3	0	2	2	0
No choice		4-4	7	2	2	0
General		4-5	1	0	0	0
5. General	3					
Matric		5-1	0	0	0	0
Comm		5-2	0	1	1	0
Tech		5-3	2	0	1	0
No choice		5-4	0	0	0	0
General		5-5	1	1	1	0(+1)*4
Totals			72	72	72	72

*1 - 3 quit, 1 failed, 2 no record available
*2 - 1 quit, 4 failed
*3 - 1 failed
*4 - 1 quit

TABLE XII

EDUCATIONAL CHANGES IN GROUP A

	At P_1	Course Changes	$P_1 - P_2$	$P_2 - P_3$	$P_1 - T_2$	$P_3 - P_4$
1. Matriculation	32					
Matric		1-1	31	45	30	47(+1)*1
Comm		1-2	0	1	0	1
Tech		1-3	1	1	1	1
No choice		1-4	0	0	0	0
General		1-5	2	1	1	0
2. Commercial	6					
Matric		2-1	1	2	1	0
Comm		2-2	5	6	5	10(+2)*2
Tech		2-3	0	1	0	1
No choice		2-4	0	1	0	0
General		2-5	0	0	0	0
3. Technical	5					
Matric		3-1	1	1	2	0
Comm		3-2	0	1	1	0(+4)(+1)*3
Tech		3-3	4	4	1	1
No choice		3-4	0	1	1	0
General		3-5	0	0	0	0
4. No Choice	28					
Matric		4-1	15	1	18	0
Comm		4-2	5	2	5	0
Tech		4-3	2	0	3	1
No choice		4-4	5	0	1	0(+1)*4
General		4-5	0	1	1	0
5. General Course	0					
Matric		5-1	0	2	0	1
Comm		5-2	0	0	0	0
Tech		5-3	0	0	0	0
No choice		5-4	0	0	0	0
General		5-5	0	0	0	0
Totals			72	72	72	72

*1 - 1 failure
*2 - 2 quit school
*3 - 4 failures, 1 quit school
*4 - 1 quit school

TABLE XXII

EDUCATIONAL COURSE CHANGES IN GROUP C

	At F_1	Course Changes	$F_1 - F_2$	$F_2 - F_3$	$F_1 - F_3$	$F_3 - F_4$
1. Matriculation	24					
Matric		1-1	22	33	22	43(-3)*1
Comm		1-2	1	2	2	4
Tech		1-3	0	0	0	2
No choice		1-4	1	0	0	0
General		1-5	0	0	0	0
2. Commercial	11					
Matric		2-1	0	4	5	1
Comm		2-2	9	6	5	4(-4)*2
Tech		2-3	0	1	0	0
No choice		2-4	2	0	1	0
General		2-5				
3. Technical	6					
Matric		3-1	1	4	4	0
Comm		3-2	0	0	0	0
Tech		3-3	5	4	2	3(-5)*3
No choice		3-4	0	2	0	0
General		3-5	0	0	0	0
4. No Choice	31					
Matric		4-1	12	8	20	1
Comm.		4-2	1	0	2	0
Tech		4-3	4	3	6	1
No choice		4-4	12	3	3	0(-1)*5
General		4-5	2	0	0	0
5. General Course	0					
Matric		5-1	0	1	0	0
Comm		5-2	0	1	0	0
Tech		5-3	0	0	0	0
No choice		5-4	0	0	0	0
General		5-5	0	0	0	0
Totals			72	72	72	72

*1 - 2 failed, 1 quit school
*2 - 4 failed
*3 - 5 failed
*4 - 1 failure
*5 - 1 quit school

APPENDIX C

RAW DATA TABLES SHOWING RATIOS OF PERFORMANCE, STABILITY AND COMPATIBILITY

TABLE XIV

R A T I O O F P E R M A N E N C E

COURSE AND VOCATIONAL CHOICES BY PERIODS OF TREATMENT

Phase	Treatment	Group	Latric		Comm		Tech		General		No Choice	
			C	V	C	V	C	V	C	V	C	V
(First) P$_1$ - P$_2$	GC	A	24/30	24/29	9/10	5/7	9/14	7/10	1/3	/	7/15	17/26
	CG	B	31/33	34/35	5/6	4/5	4/5	0/2	0/0	/	5/23	11/29
	XT	C	22/24	27/33	9/11	8/9	5/6	3/3	0/0	/	7/21	15/27
(Second) P$_2$ - P$_3$	CO	A	27/29	29/30	12/15	10/12	9/12	3/4	1/2	/	2/13	14/25
	GC	B	45/48	39/46	6/10	3/7	4/7	2/2	0/2	/	0/5	6/17
	CG	C	31/35	32/37	6/11	8/12	4/9	3/7	0/2	/	3/15	11/16
(Third) P$_3$ - P$_4$	XT	A	32*/37	27*/35	10*/20	11*/15	3*/11	0*/3	0*/1	/	0/3	9*/19
	XT	B	47*/51	37*/43	10*/11	5*/6	1*/6	1*/12	0/2	/	0*/2	3*/10
	XT	C	42*/50	32*/40	4*/9	5*/10	3*/8	3*/7	0/0	/	0/5	4*/14

*Failures and/or dropouts are included in these scores as failures and/or dropouts decrease number of choices in numerator of ratio.

Method of Computing Permanence Ratio:

1. Denominator shows number of choices at the beginning of a period of treatment.
2. Numerator is the number of choices remaining at the end of a period of treatment.

TABLE IV

COMPARATIVE STABILITY OF EDUCATIONAL COURSE AND VOCATIONAL CHOICES MADE DURING TREATMENT PERIODS WITH CHOICES MADE AT COUNSELLING INTERVIEWS

Phase	Treatment	Group	Matric		Comm.		Tech.		Gen. C.		No Choice	
			C	V	C	V	C	V	C	V	C	V
At P_1	XT	A	30/41	29/33	10/19	7/14	14/8	10/4	2/0	0/0	15/1	26/16
	XT	B	32/49	35/41	6/9	5/6	5/6	2/2	0/0	0/0	21/0	16/22
	VT	C	24/48	33/41	11/14	9/11	6/9	3/9	1/0	0/0	21/1	27/5
P_1 to P_2	CG	A	29/41	30/33	15/19	12/14	12/8	4/4	3/0	0/0	14/1	25/16
	CO	B	48/49	46/41	10/9	7/6	12/6	2/2	2/0	0/0	5/5	17/14
	XT	C	35/48	37/41	11/14	12/11	9/9	7/9	2/0	0/0	15/1	16/5
P_2 to P_3	CG	A	37/41	35/33	20/19	15/14	11/8	3/4	1/0	0/0	2/1	10/16
	GO	B	51/49	43/41	11/9	6/6	6/6	12/2	2/0	0/0	2/3	10/19
	CG	C	50/48	40/41	9/14	10/11	8/9	7/9	0/0	0/0	5/1	14/5
P_3 to P_4	XT	A	32/41 *(+1)	30/33 *(+1)	12/19 *(+6)	13/14 *(+2)	7/8 *(+5)	4/4 *(+1)	1/0 *(+1)	0/0	0/1 *(+10)	14/1 *(+18)
	XT	B	48/40 *(+1)	43/41 *(+2)	11/9 *(+2)	9/6 *(+2)	4/6 *(+5)	5/2 *(+4)	0/0	0/0	0/5 *(+1)	9/14 *(+10)
	XT	C	41/48 *(+2)	43/41 *(+4)	8/14 *(+4)	8/11 *(+4)	6/9 *(+5)	5/9 *(+3)	0/0 *(+1)	0/0	9/1 *(+1)	6/5 *(+2)

* Failures and / or dropouts (indicated in brackets) not included.

TABLE XVI

RATIO OF COMPATIBILITY OF VOCATIONAL AND COURSE CHOICES

Treatment Period	Treatment	Group	Matric	Comm	Tech	No Choice	General
At P_1	XT	A	29/30	7/10	10/14	15/26	0/3
	XT	B	33/35	5/6	2/5	28/29	0/0
	XT	C	24/33	9/11	3/6	27/31	0/0
First P_1 to P_2	CO	A	29/30	12/15	4/12	14/25	0/3
	CO	B	46/48	7/10	2/7	5/17	0/2
	XT	C	35/37	11/12	7/9	15/16	0/2
Second P_2 to P_3	CO	A	35/37	15/20	3/11	2/19	0/0
	CO	B	43/51	6/11	6/12	2/10	0/2
	CO	C	40/50	9/10	7/8	5/14	0/0
Third P_3 to P_4	XT	A	30/39*	12/13*	1/7*	0/16*	0/1*
	XT	B	43/48*	9/11*	4/5*	0/2*	0/0*
	XT	C	42/44*	9/8*	5/6*	0/6*	0/0*

*Ratios affected by failures and / or dropouts.

Course choices that are necessary to meet the educational standards required for a specific vocation are termed in this study as compatible.

The above table gives the compatibility of educational and vocational choices. These are shown by treatment periods and are given in the form of ratios. The degree of coincidence of course and vocational choices indicates the ratio of compatibility. As the greater number of choices, whether of course or vocational, was in all cases used as the denominator of the ratio, the ratios may be computed as percentage scores of one-hundred percent or less, as in Table V. Thus, on the common basis of percentage scores, compatibility may be compared with persistence and stability.

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